Available Fault Current Calculation

Ver. 6.3

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Utility Fault Current 12,800 amperes

I = kVA x 1000 = trans. FLA / E

kVA =
E = 240
trans. FLA = 0

Isca = trans. FLA x 100 / transformer Z = 0 %

Isca = ampere short-circuit current RMS symmetrical. Isca = 0 amperes

Point to Point Method

Single Phase 240/120

'f ' factor = 2 x L x I / N x C x E L-N

Length (distance) FEET L = 75 — Copper in Nonmetallic Raceway
(ASC) Isca = 12,800
conductors per phase N = 2
Phase conductor constant C = 13,923 **Phase Conductor** 3/0
Volt Line to Line E L - L = 240 Volt
f = 0.287
Neutral conductor constant C = 13,923 **Neutral Conductor** 3/0
Volt Line to Neutral E L - N = 120 Volt
f = 0.575

Multiplier M = 1 / 1 + f

Line to Line M = 0.777
Line to Neutral M = 0.635

Fault Current at Service Equipment

Isca x M = fault current at terminals of main disconnect L- L = 9,943 **amperes**
Isca x M = fault current at terminals of main disconnect L- N = 12,194 **amperes**

REGISTERED PROFESSIONAL ENGINEER 83322PE 9/26/14 OREGON JULY 14, 2009 NORMAN E. GOTH

Expires: 6/30/15

Fault Current from **Main Disc. To Panel "MP"** — Copper in Metal Raceway — Single Phase

Single Phase Feeder

'f ' factor = 2 x L x I / N x C x E L-N

Length (distance) L = 6
(ASC) Isca = 9,943 Phase 8,545 Neutral
conductors per phase N = 2
Phase conductor constant C = 12,844 **Phase Conductor** 3/0
Volt Line to Line E L - L = 208 Volt
f = 0.022
Neutral conductor constant C = 12,844 **Neutral Conductor** 3/0
Volt Line to Neutral E L - N = 120 Volt
f = 0.033

Multiplier M = 1 / 1 + f

Line to Line M = 0.978
Line to Neutral M = 0.968

Isca x M = fault current at terminal of the panel L- L 9,726 **amperes**
Isca x M = fault current at terminal of the panel L- N 8,270 **amperes**

Calculation does not include motor contribution

Fault Current from **Panel "MP" to Panel "PLP"** — Copper in Metal Raceway — Single Phase

Single Phase Feeder

'f ' factor = 2 x L x I / N x C x E L-N

Length (distance) L = 6
(ASC) Isca = 9,726 Phase 8,270 Neutral
conductors per phase N = 1
Phase conductor constant C = 7,293 **Phase Conductor** 1
Volt Line to Line E L - L = 208 Volt
f = 0.077
Neutral conductor constant C = 7,293 **Neutral Conductor** 1
Volt Line to Neutral E L - N = 120 Volt
f = 0.113

Multiplier M = 1 / 1 + f

Line to Line M = 0.929
Line to Neutral M = 0.898

Isca x M = fault current at terminal of the panel L- L 9,031 **amperes**
Isca x M = fault current at terminal of the panel L- N 7,428 **amperes**

Calculation does not include motor contribution

Fault Current from **Panel "PLP" to Panel "E"** — Copper in Metal Raceway — Single Phase

Single Phase Feeder

'f ' factor = 2 x L x I / N x C x E L-N

Length (distance) L = 6
(ASC) Isca = 9,031 Phase 7,428 Neutral
conductors per phase N = 1
Phase conductor constant C = 617 **Phase Conductor** 12
Volt Line to Line E L - L = 208 Volt
f = 0.844
Neutral conductor constant C = 617 **Neutral Conductor** 12
Volt Line to Neutral E L - N = 120 Volt
f = 1.204

Multiplier M = 1 / 1 + f

Line to Line M = 0.542
Line to Neutral M = 0.454

Isca x M = fault current at terminal of the panel L- L 4,897 **amperes**
Isca x M = fault current at terminal of the panel L- N 3,371 **amperes**

Calculation does not include motor contribution

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